



FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON

OFFICE OF  
THE CHAIRMAN

March 20, 1998

The Honorable John McCain  
Chairman  
Committee on Commerce, Science  
and Transportation  
United States Senate  
508 Dirksen Senate Office Building  
Washington, D.C. 20510

The Honorable Sam Brownback  
United States Senate  
303 Hart Senate Office Building  
Washington, D.C. 20510

Dear Chairman McCain and Senator Brownback:

Thank you for your recent letter concerning the Commission's implementation of section 271 of the Communications Act of 1934, as amended by the Telecommunications Act of 1996. I fully agree that we must have an orderly and predictable process for consideration of Bell Operating Companies' (BOCs') section 271 applications for entry into the long distance market. As part of this process, BOCs should have adequate information concerning the measures that they must take to satisfy the requirements established by Congress in section 271, including the competitive checklist. I am committed to enhancing the Commission's review and disposition of section 271 applications, and I welcome your suggestions in this regard.

I agree that the Commission can and should provide as much guidance as possible regarding the requirements of section 271, both before applications are filed and when resolving future applications. I also believe that we must periodically reassess the section 271 process, and take steps to improve it as we gain more experience. Toward that end, I recently decided to initiate, and devote substantial Commission resources to, a dialogue between the Commission and the BOCs, competitive local exchange providers, interexchange carriers, and other interested participants. This effort reflects my desire to provide additional guidance to all participants on issues not yet addressed in previous applications. It also is intended to strengthen the quality of proof submitted and to increase the predictability of the section 271 process for all involved.

It is clear from this dialogue that some checklist items are considerably more controversial than others. For instance, there have been spirited discussions among all participants over the scope of the obligation of a BOC to allow competing carriers to combine network elements. For other checklist items, such as white pages, dialing parity, and access to signaling and databases, there seems to be a consensus among participants in the dialogue as to what performance requirements the Act imposes. For yet other checklist items, such as numbering administration, number portability, and reciprocal compensation, while there is

some disagreement among participants in the dialogue over what performance requirements the Act imposes, the areas of disagreement appear relatively narrow and straightforward.

I have directed the Bureau staff to be as open and responsive as possible to all the participants when discussing the factors the staff considers important in evaluating whether a BOC has fully implemented the competitive checklist. We have received generally positive feedback about the dialogue thus far. I am hopeful that this dialogue, in conjunction with Commission rules and past Commission orders, will help the BOCs understand the performance requirements set forth in the Act and the Commission's implementing rules.

Although the Commission has not conducted a rulemaking addressing the requirements of section 271, virtually all of the checklist items cross-reference or duplicate substantially other sections of the Act, particularly section 251. The Commission's rules implementing sections 251 and 252 directly set forth the requirements the BOCs must meet. Most of these rules were upheld by the United States Court of Appeals for the Eighth Circuit on review, with the notable exception of rules implementing the pricing standards contained in section 252(d). In its recent orders reviewing the BOCs' section 271 applications, the Commission has addressed issues arising under section 271(c)(1)(A) and (B) and section 271(c)(2)(b)(i) (interconnection), (ii) (access to network elements, including operations support systems), (v) (local transport), (vi) (switching), (vii) (access to 911/E911 services), (xi) (number portability), and (xiv) (resale). The positive steps taken by the BOCs in recent months to meet the performance requirements of the Act signify that the requirements of the checklist are achievable.

In my view, as a general rule, the standard as set out by the statute is "nondiscriminatory access." Nondiscriminatory access requires BOCs to show that "parity" has been achieved, not "perfection." In other words, BOCs must adhere to a version of the "Golden Rule" -- that is, a BOC must do unto others as it would do unto itself.

In order to implement nondiscriminatory access, the BOC must provide access to the operations support systems that is necessary for the new entrant to provide local exchange services to customers. Because OSS is an unbundled network element, it is directly encompassed by checklist item (ii). In addition, OSS directly or indirectly has an impact on nine of the remaining 13 checklist items. Nondiscriminatory access to a BOC's OSS is an important part of the checklist because it enables new entrants to communicate effectively with the BOC regarding such basic activities as placing customer orders and providing repair and maintenance services.

In order to respond to your request for views on each checklist item, I have attached summaries, prepared by Common Carrier Bureau staff, addressing each item of the competitive checklist in further detail. In some instances, the checklist incorporates other provisions of the Act. All of the requirements flow directly from the terms of the checklist, and therefore do not "limit or extend the terms used in the competitive checklist," 47 U.S.C. § 271(d)(4). Of course, there may be multiple ways to demonstrate compliance with a


particular checklist item. While the checklist imposes a nondiscriminatory access requirement on the BOCs, it leaves to the BOCs substantial discretion to determine the best way to design and engineer their networks to meet this obligation.

The information included in these summaries reflects the discussions that Bureau staff have had since the dialogue began in January. Because the dialogue is an on-going process, additional issues may arise as discussions progress. These Bureau staff views are not binding on the Commissioners. Commission action on individual section 271 applications will be decided on the basis of the record filed in each proceeding.

I appreciate your views regarding the section 271 process and look forward to the approval of section 271 applications. Passing this milestone will represent a great step forward in achieving Congress' goal of local exchange competition because the BOC will have taken the minimum steps required by the Act to open this market to competition. BOC entry into the in-region, interLATA market will also further long distance competition and benefit consumers. I continue to believe, however, that it is vitally important to ensure that the BOCs have truly opened their local markets to competition by fully implementing the requirements of section 271 before they are permitted to enter the in-region, interLATA market. I am hopeful that the on-going dialogue will hasten the day when the Commission receives section 271 applications that satisfy all the requirements of section 271 and can be approved by the Commission.

As always, I welcome the opportunity to discuss this matter with you personally.

Sincerely,



William E. Kennard  
Chairman

Attachments

## COMMON CARRIER BUREAU STAFF DOCUMENTS

### Table of Contents

Overview of Common Carrier Bureau Staff Summaries	Att. A
Citations to Commission Orders	Att. B
Common Carrier Bureau Staff Summaries	
Interconnection	(i)
Access to Unbundled Network Elements	(ii)
Nondiscriminatory Access to Poles, Ducts, Conduits, and Rights-of-Way	(iii)
Unbundled Local Loops	(iv)
Unbundled Local Transport	(v)
Unbundled Local Switching	(vi)
911/E911, Directory Assistance, and Operator Services	(vii)
White Pages Listings	(viii)
Numbering Administration	(ix)
Databases and Associated Signaling	(x)
Number Portability	(xi)
Local Dialing Parity	(xii)
Reciprocal Compensation	(xiii)
Resale	(xiv)

## OVERVIEW OF COMMON CARRIER BUREAU STAFF SUMMARIES

The following paragraphs present a brief outline of the fourteen checklist items. An important aspect of section 271 is that local markets remain open after BOC entry into long distance. Ongoing performance monitoring once a BOC receives section 271 authorization is critical. Under the statute, the Commission can exercise its enforcement powers under section 271(d)(6) if a BOC has ceased to meet the conditions required for approval.

1. Interconnection: This checklist item requires a BOC to allow requesting carriers to link their networks to the BOC's network for the mutual exchange of traffic. To fulfill the nondiscrimination obligation under checklist item (i), a BOC must show that it provides interconnection at a level of quality that is indistinguishable from that which the BOC provides itself, a subsidiary, or any other party. Interconnection is necessary so that local exchange customers served by one company are able to call customers served by a different company. 47 U.S.C. § 271(c)(2)(B)(i).

2. Unbundled Network Elements: Network elements are the specific segments of the telephone network. "Access" to an unbundled network element means that the BOC must provide a connection to the network element at any technically feasible point under rates, terms, and conditions that are just, reasonable, and nondiscriminatory. To fulfill the nondiscrimination obligation under checklist item (ii), the BOC must provide access to the BOC's OSS, meaning the information, systems, and personnel necessary to support the elements and services. This is important because access to the BOC's OSS provides new entrants with the ability to order service for their new customers and allows new entrants to communicate effectively with the BOC regarding such basic activities as placing orders and providing repair and maintenance service for customers. 47 U.S.C. § 271(c)(2)(B)(ii).

In addition, a BOC must provide nondiscriminatory access to network elements in a manner that allows requesting carriers to combine such elements. The use of network elements in conjunction with a competing carrier's network is an important entry strategy for new entrants as new entrants will most likely not have deployed fully redundant networks when they initially enter the local market. 47 U.S.C. § 271(c)(2)(B)(ii).

3. Poles, Ducts, Conduits, and Rights-of-Way. Telephone company wires must be attached to, or pass through, poles, ducts, conduits, and rights-of-way. In order to fulfill the nondiscrimination obligation under checklist item (iii), a BOC must show that competing providers can obtain access to its poles, ducts, conduits, and rights-of-way within reasonable time frames and on reasonable terms and conditions, with a minimum of administrative

costs, and consistent with fair and efficient practices. Failure by the BOC to provide such access may prevent competing carriers from serving certain customers. 47 U.S.C. § 271(c)(2)(B)(iii).

4. Loops. Local loops are the wires, poles, and conduit that connect the telephone company end office to the customer's home or business. To satisfy the nondiscrimination requirement under checklist item (iv), a BOC must demonstrate that it can efficiently furnish unbundled loops to competing carriers within a reasonable timeframe, with a minimum level of service disruption, and at the same level of service quality. Nondiscriminatory access to unbundled local loops ensures that new entrants can provide quality telephone service promptly to new customers without constructing new loops to each customer's home or business. 47 U.S.C. § 271(c)(2)(B)(iv).

5. Transport. Transport facilities are the trunks that connect different switches within the BOC's network or those switches with long distance carriers' facilities. This checklist item requires a BOC to provide requesting carriers with transmission links that are dedicated to the use of the requesting carrier as well as links that are shared with other carriers, including the BOC. Nondiscriminatory access to transport ensures that consumer calls travelling over competing carrier lines are completed properly. 47 U.S.C. § 271(c)(2)(B)(v).

6. Switching. A switch connects end user lines to other end user lines, and connects end user lines to trunks used for transporting a call to another central office or to a long-distance carrier. Switches can also provide end users with "vertical features" such as call waiting, call forwarding, and caller ID, and can direct a call to a specific trunk, such as to a competing carrier's operator services. To meet this checklist item, the BOC must demonstrate that it provides nondiscriminatory access to all of the features, functions, and capabilities of the unbundled local switch. This checklist item is important because it allows the new entrant to make use of the BOC's switch, and it enables customers of the new entrant to have access to the same features a BOC provides, such as call waiting. 47 U.S.C. § 271(c)(2)(B)(vi).

7. 911 and E911, Directory Assistance, and Operator Services. 911 and E911 services transmit calls from end users to emergency personnel. Customers use directory assistance and operator services to obtain listing information and other call completion services. Checklist item (vii) requires the BOC to provide competing providers with nondiscriminatory access to 911/E911, operator services, and directory assistance, *i.e.*, access that is the same as the access the BOC provides to itself. It is critical that BOCs

provide new entrants with accurate and nondiscriminatory access to 911/E911 services so that customers subscribing to services provided by new entrants are able to reach emergency assistance. 47 U.S.C. § 271(c)(2)(B)(vii).

8. White Pages. White pages are the directory listings of telephone numbers of residences and businesses in a particular area. This checklist item ensures that white pages listings for customers of different carriers are comparable, in terms of accuracy and reliability, notwithstanding the identity of the customer's telephone service provider. 47 U.S.C. § 271(c)(2)(B)(viii).

9. Numbering Administration. Telephone numbers are presently assigned to telecommunications carriers based on the first three digits of the local number known as "NXX" codes. To fulfill the nondiscrimination obligation in checklist item (ix), a BOC must provide competing carriers with the same access to new NXX codes within an area code that the BOC enjoys. This checklist item ensures that competing providers have the same access to new telephone numbers as the BOC does. 47 U.S.C. § 271(c)(2)(B)(ix).

10. Databases and Signaling. Databases and associated signaling refer to the call-related databases and signaling systems that are used for billing and collection or the transmission, routing, or other provision of a telecommunications service. To fulfill the nondiscrimination obligation in checklist item (x), a BOC must demonstrate that it provides new entrants with the same access to these call-related databases and associated signaling that it provides itself. This checklist item ensures that competing providers have the same ability to transmit, route, complete and bill for telephone calls as the BOC. 47 U.S.C. § 271(c)(2)(B)(x).

11. Number Portability. Number portability enables consumers to take their phone number with them when they change local telephone companies. To fulfill checklist item (xi), the BOC must provide number portability in a nondiscriminatory manner as soon as reasonably possible following a request from a competitor. This checklist item is important because it permits consumers to change service providers without having to change their telephone number. 47 U.S.C. § 271(c)(2)(B)(xi).

12. Dialing Parity. Local dialing parity permits customers to make local calls in the same manner regardless of who their service provider is. To fulfill the nondiscrimination obligation in checklist item (xii), a BOC must establish that customers of a competing provider are able to dial the same number of digits to make a local telephone call, notwithstanding the identity of the customer's, or the called party's, local telephone service

provider. In addition, the dialing delay experienced by the customers of a competing provider should not be greater than that experienced by customers of the BOC. This checklist item ensures that consumers are not inconvenienced in how they make calls simply because they subscribe to a competing provider for local telephone service. 47 U.S.C. § 271(c)(2)(B)(xii).

13. Reciprocal Compensation. Reciprocal compensation requires the BOCs to compensate new entrants and wireless carriers for the cost of transporting and terminating a local call from the BOC, and requires the new entrants and wireless carriers to compensate the BOC for the cost of transporting and terminating a local call from the new entrant or wireless carrier. Alternatively, the BOC and the new entrant or wireless carrier may enter into an arrangement whereby neither of the two carriers charges the other for terminating local traffic that originates on the other carrier's network. This checklist item is important to ensuring that all carriers that originate calls bear the cost of terminating such calls. 47 U.S.C. § 271(c)(2)(B)(xiii).

14. Resale. This checklist item requires the BOC to offer to telecommunications carriers at wholesale rates all of the retail telecommunications services it provides to subscribers that are not telecommunications carriers. The BOC is required to make its telecommunications services available for resale without unreasonable or discriminatory conditions or limitations. This checklist item is important because it establishes a mode of entry into the local market for carriers that have not deployed their own facilities. 47 U.S.C. § 271(c)(2)(B)(xiv).

Another important aspect of section 271 is the pricing of unbundled network elements. The United States Court of Appeals for the Eighth Circuit recently held that the FCC should "confine its pricing role under section 271(d)(3)(A) to determining whether applicant BOCs have complied with the pricing methodology and rules adopted by the state commissions and in effect in the respective states in which such BOCs seek to provide in-region, interLATA services." *Iowa Utilities Board v. FCC*, Order on Motions for Enforcement of the Mandate, No. 96-3321 (Jan. 22, 1998), *petition for cert. filed*. Accordingly, these staff summaries do not focus on pricing issues.



## CITATIONS TO COMMISSION ORDERS

The attached Common Carrier Bureau staff summaries cite to the following Commission orders:

*Local Competition First Report and Order*

*Implementation of Local Competition Provisions of the Telecommunications Act of 1996, First Report and Order, 11 FCC Rcd 15499 (1996)*

*Local Competition Second Report and Order*

*Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Second Report and Order and Memorandum Opinion and Order, 11 FCC Rcd 19392 (1996)*

*Local Competition Third Reconsideration Order*

*Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Third Order on Reconsideration and Further Notice of Proposed Rulemaking, FCC 97-295 (rel. Aug. 18, 1997)*

*Ameritech Michigan Section 271 Order*

*Application of Ameritech Michigan Pursuant to Section 271 of the Communications Act of 1934, as amended, To Provide In-Region, InterLATA Services In Michigan, Memorandum Opinion and Order, 12 FCC Rcd 20543 (1997)*

*BellSouth South Carolina Section 271 Order*

*Application by BellSouth Corporation, et al. Pursuant to Section 271 of the Communications Act of 1934, as amended, To Provide In-Region, InterLATA Services in South Carolina, Memorandum Opinion and Order, 13 FCC Rcd 539 (1998)*

*BellSouth Louisiana Section 271 Order*

*Application by BellSouth Corporation, et al. Pursuant to Section 271 of the Communications Act of 1934, as amended, To Provide In-Region, InterLATA Services in Louisiana, Memorandum Opinion and Order, FCC 98-17 (rel. Feb. 4, 1998)*

*Telephone Number Portability First Report and Order*

*Telephone Number Portability, First Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 8352 (1996)*

*Telephone Number Portability First Reconsideration Order*

*Telephone Number Portability, First Memorandum Opinion and Order on Reconsideration, 12 FCC Rcd 7236 (1997)*

*Pole Attachment Telecommunications Rate Order*

*Implementation of Section 703(e) of the Telecommunications Act of 1996, Amendment of the Commission's Rules and Policies Governing Pole Attachments, Report and Order, FCC 98-20 (rel. Feb. 6, 1998)*

### **Checklist Item (i): Interconnection**

#### **Background**

- Section 271(c)(2)(B)(i) of the Act requires a section 271 applicant to provide or offer to provide "[i]nterconnection in accordance with the requirements of sections 251(c)(2) and 252(d)(1)."
- Section 251(c)(2) imposes upon incumbent LECs "the duty to provide, for the facilities and equipment of any requesting telecommunications carrier, interconnection with the local exchange carrier's network . . . for the transmission and routing of telephone exchange service and exchange access."
- Pursuant to section 251(c)(2), such interconnection must be: (1) provided "at any technically feasible point within the carrier's network;" (2) "at least equal in quality to that provided by the local exchange carrier to itself or . . . [to] any other party to which the carrier provides interconnection;" and (3) provided on rates, terms, and conditions that are "just, reasonable, and nondiscriminatory, in accordance with the terms and conditions of the agreement and the requirements of [section 251] . . . and section 252."
- Section 251(c)(6) requires incumbent LECs to provide physical collocation of equipment necessary for interconnection unless the LEC can demonstrate that physical collocation is not practical for technical reasons or because of space limitations. In that event, the incumbent LEC is still obligated to provide virtual collocation of interconnection equipment.
- Section 252(d)(1) of the Act states that "[d]eterminations by a State commission of the just and reasonable rate for the interconnection of facilities and equipment for purposes of [section 251(c)(2)] . . . (A) shall be (i) based on the cost . . . of providing the interconnection . . . and (ii) nondiscriminatory, and (B) may include a reasonable profit."

#### **Checklist Discussion**

##### **Any Technically Feasible Point**

- Competing carriers have the right to deliver traffic terminating on an incumbent LEC's network at any technically feasible point on that network. 47 U.S.C. § 251(c)(2); 47 C.F.R. § 51.305(a)(2); *Local Competition First Report and Order* at ¶ 209.

##### **Methods of Interconnection**

- Competing carriers may choose any technically feasible method of interconnection at a particular point. *Local Competition First Report and Order* at ¶ 549. Technically feasible methods of interconnection include, but are not limited to: physical collocation

and virtual collocation at the premises of an incumbent LEC and meet point interconnection arrangements. 47 C.F.R. § 51.321; *Local Competition First Report and Order* at ¶553.

- The incumbent LEC must submit to the state commission detailed floor plans or diagrams of any premises where the incumbent LEC claims that physical collocation is not practical because of space limitations. 47 C.F.R. § 51.321(f); *Local Competition First Report and Order* at ¶ 602.
- Bureau staff believes that a BOC must have processes and procedures in place to ensure that physical and virtual collocation arrangements are available on terms and conditions that are "just, reasonable, and nondiscriminatory" in accordance with section 251(c)(6). Useful information to determine compliance with this checklist item is the length of time required for an applicant to process and implement requests for both physical and virtual collocation. *See BellSouth South Carolina Section 271 Order* at ¶¶ 200-02.

#### Interconnection that is Equal in Quality

- "[T]he equal in quality standard of section 251(c)(2)(C) requires an incumbent LEC to provide interconnection between its network and that of a requesting carrier at a level of quality that is at least indistinguishable from that which the incumbent provides itself, a subsidiary, an affiliate or any other party." *Local Competition First Report and Order* at ¶ 224.
- An incumbent LEC must design its "interconnection facilities to meet the same technical criteria and service standards, such as probability of blocking in peak hours and transmission standards, that are used [for the interoffice trunks] within [its] . . . own network[]." 47 C.F.R. § 51.305(a)(3); *Local Competition First Report and Order* at ¶ 224; *see also Ameritech Michigan Section 271 Order* at ¶ 255.
- The equal in quality obligation is not limited to service quality perceived by end users, and includes, but is not limited to, service quality as perceived by the requesting telecommunications carrier. 47 C.F.R. § 51.305(a)(3); *Local Competition First Report and Order* at ¶ 224.
- Useful information to determine compliance with this checklist item is the call completion rate for calls originating on the BOC's network that terminate with BOC customers and the completion rate for calls originating on the BOC's network that terminate with competing LECs' customers. *See Ameritech Michigan Section 271 Order* at ¶ 235.

### Just and Reasonable Rates, Terms, and Conditions of Interconnection

- By providing interconnection to a competitor in a manner less efficient than the incumbent LEC provides itself, the incumbent LEC violates the duty to be "just" and "reasonable" under section 251(c)(2)(D). *Local Competition First Report and Order* at ¶ 218.

### Nondiscriminatory Rates, Terms, and Conditions of Interconnection

- An incumbent LEC must accommodate a competitor's request for two-way trunking where technically feasible. 47 C.F.R. § 51.305(f); *Local Competition First Report and Order* at ¶ 219.
- Bureau staff believes that a BOC must engineer, repair, and maintain its interconnection trunks to the competing carrier in the same manner that the BOC performs these functions on its own interoffice transmission facilities.
  - Useful information to determine compliance with this checklist item is the time required for a BOC to identify and repair outages on interconnection trunks connecting BOC and competing carrier facilities and the time required for a BOC to identify and repair outages that disrupt service on its own interoffice transmission trunks; and a BOC's establishment of standardized procedures for the ordering and provision of interconnection trunks.
- The BOC must ensure that a competing carrier has sufficient information about its network to remedy network blockage that occurs within the BOC's network, but affects both the BOC's customers and the competing carrier's customers. *Ameritech Michigan Section 271 Order* at ¶ 246.
  - Useful information to determine compliance with this requirement includes BOC traffic forecasts and data indicating the percentage of calls originating on the BOC network and terminating on the BOC's and CLEC's network, respectively.
- Establishing appropriate trunking architecture and proper interconnection arrangements is the responsibility of both the BOC and competing carriers. *Ameritech Michigan Section 271 Order* at ¶ 246.
  - Bureau staff believes that possible measures that the BOC and competing carriers can take to remedy trunk blockage problems include: installing two-way trunking arrangements where appropriate, allowing direct end office trunking, augmenting capacity on existing trunk groups, ordering reciprocal inbound trunk groups in tandem with competing carriers' ordering of outbound trunk groups, having the necessary equipment and facilities available to handle

trunk augmentation, and establishing alternate routing for traffic designated for a competing carrier switch.

- Bureau staff believes that a BOC can demonstrate that it is meeting its statutory obligations with respect to interconnection by submitting performance measurements regarding its provision of interconnection trunks (installation of new trunks and augmentations to existing trunk groups) and collocation arrangements (physical and virtual). Such performance measurements will enable the Commission to determine whether this checklist item is being provided in accordance with the applicable statutory standard in terms of timeliness, quality, and accuracy. Ongoing performance monitoring will assist in ensuring that the BOC continues to meet its statutory obligations after receiving section 271 authorization.

### Checklist Item (ii): Access to Unbundled Network Elements

Because specific network elements are also addressed in other checklist items, this discussion only addresses the requirements for access to all network elements. In particular, this section addresses (1) the operations support systems ("OSS") that are necessary to provide access to other network elements as well as resold services; and (2) the provision of network elements in a manner that allows competing carriers to combine such elements.

#### **1. Access to Operations Support Systems**

##### Background

- Section 271(c)(2)(B)(ii) of the Act requires a section 271 applicant to offer "nondiscriminatory access to network elements in accordance with the requirements of sections 251(c)(3) and 252(d)(1)."
- Section 251(c)(3) of the Act requires BOCs to provide access to network elements pursuant to "conditions that are just, reasonable, and nondiscriminatory . . . ."
- Section 252(d)(1) of the Act states that "[d]eterminations by a State commission of the just and reasonable rate for . . . network elements for purposes of [section 251(c)(3)] . . . (A) shall be (i) based on the cost . . . of providing the . . . network element . . . and (ii) nondiscriminatory, and (B) may include a reasonable profit."

##### Checklist Discussion

- The Commission identified the following network elements, which must be provided on a nondiscriminatory basis pursuant to section 251(c)(3):
  - local loops;
  - network interface devices;
  - local switching;
  - interoffice transmission facilities;
  - signaling networks and call-related databases;
  - operations support systems; and
  - operator services and directory assistance.

*See* 47 C.F.R. § 51.319; *Local Competition First Report and Order* at ¶ 516. The Eighth Circuit Court of Appeals upheld this finding. *Iowa Utils. Bd.*, 120 F.3d at 808-09.

- The Commission has set forth specific requirements for access to network elements, including, among other things, that timeliness, quality, and accuracy be substantially the same as the BOC provides to itself. *See generally* 47 C.F.R. § 51.311 and 51.313.

- The term "operations support systems," or OSS, refers to the computer systems, databases, and personnel that incumbent carriers rely upon to discharge many internal functions necessary to provide service to their customers. A competing carrier must obtain access to the same OSS functions (that is, functions provided by the relevant databases, computer systems, and personnel) in order to sign up customers, place an order for services or facilities with the incumbent, track the progress of that order to completion, receive relevant billing information from the incumbent, and obtain prompt repair and maintenance services for its customers.
- As outlined in the *Ameritech Michigan Section 271 Order* and the *BellSouth South Carolina Section 271 Order*, the Commission undertakes a two part inquiry in evaluating whether a BOC is meeting its statutory obligation to provide competing carriers with nondiscriminatory access to OSS functions.
  - First, the BOC must demonstrate that it has deployed the necessary systems and personnel to provide competing carriers with access to each of the necessary OSS functions, and that the BOC has adequately assisted competing carriers in understanding how to implement and use all of the OSS functions available to them. *Ameritech Michigan Section 271 Order* at ¶ 136; *BellSouth South Carolina Section 271 Order* at ¶ 96.
    - A BOC must demonstrate that it has developed electronic and manual interfaces that allow competing carriers to access all of the OSS functions identified in the *Local Competition First Report and Order*. *Ameritech Michigan Section 271 Order* at ¶¶ 137-138; *BellSouth South Carolina Section 271 Order* at ¶ 96.
    - A BOC must also demonstrate that the interfaces used to access its OSS functions allow competing carriers to transfer the information received from the BOC to their own back office systems (e.g., a competing carrier's billing system) and among the various interfaces provided by the BOC (e.g., pre-ordering and ordering interfaces). *BellSouth South Carolina Section 271 Order* at ¶ 158-161.
    - The Commission has not specified particular systems or interfaces a BOC must use to demonstrate compliance with the statutory nondiscrimination requirements.
  - Second, the BOC must demonstrate that the OSS functions and interfaces are operationally ready. *Ameritech Michigan Section 271 Order* at ¶ 136; *BellSouth South Carolina Section 271 Order* at ¶ 96. In addition, the BOC's deployment of OSS functions to competing carriers must be able to handle current demand as well as reasonably foreseeable demand. *Ameritech*

*Michigan Section 271 Order* at ¶ 138; *BellSouth South Carolina Section 271 Order* at ¶ 97.

- For those OSS functions a BOC provides to a competing carrier that are analogous to OSS functions that the BOC provides to itself, the BOC must provide access to competing carriers that is equivalent to the level of access that the BOC provides to itself in terms of quality, accuracy and timeliness (i.e., it provides OSS functions in substantially the same time and manner as it provides to itself). *Local Competition First Report and Order*, 11 FCC Rcd at ¶ 517; *Ameritech Michigan Section 271 Order* at ¶ 139, *BellSouth South Carolina Section 271 Order* at ¶ 98.
- For OSS functions without a retail analog, the BOC must demonstrate that the access it provides competing carriers offers an efficient competitor a meaningful opportunity to compete. *Ameritech Michigan Section 271 Order* at ¶ 139; *BellSouth South Carolina Section 271 Order* at ¶ 98. The Commission's orders emphasize results, not the process used to achieve those results.
- While actual commercial usage is the most probative evidence that the BOC's OSS functions are operationally ready, the Commission will also consider, carrier-to-carrier testing, independent third-party testing, and internal testing. *Ameritech Michigan Section 271 Order* at ¶ 138.
- Information that compares how the BOC provides access to OSS functions to itself and to competing carriers is critical in assessing whether the BOC is providing nondiscriminatory access to such functions as required by the statute. *Ameritech Michigan Section 271 Order* at ¶¶ 204-213. Bureau staff, therefore, believes that a BOC can demonstrate compliance with the statutory requirements in checklist item (ii) by submitting comparative performance data, such as the period required to install a network element, how often the promised installation dates are met, how well the competing carrier is informed of the status of its order, and how responsive the BOC is in providing access to needed support functions. Ongoing reporting of these measurements will assist in ensuring that the BOC continues to meet its statutory obligations after receiving section 271 authorization.

## **2. Access to Combinations of Network Elements**

### **Background**

- Section 271(c)(2)(B)(ii) of the Act requires a section 271 applicant to show that



it offers "[n]ondiscriminatory access to network elements in accordance with the requirements of sections 251(c)(3) and 252(d)(1)."

- Section 251(c)(3) provides that an incumbent LEC "shall provide such unbundled elements in a manner that allows requesting carriers to combine such elements in order to provide such telecommunications service."
- Section 251(c)(6) provides that an incumbent LEC has the "duty to provide, on rates, terms, and conditions that are just, reasonable, and nondiscriminatory, for physical collocation of equipment necessary for interconnection or access to unbundled network elements at the premises of the local exchange carrier." Section 251(c)(6) further provides that an incumbent LEC "may provide virtual collocation if the local exchange carrier demonstrates to the State commission that physical collocation is not practical for technical reasons or because of space limitations."

### Checklist Discussion

- New entrants may provide telecommunications service wholly through the use of unbundled network elements purchased from incumbent LECs. 47 C.F.R. § 51.315(a); *Local Competition First Report and Order* at ¶ 328-341; see also *Iowa Utils. Bd. v. FCC*, 120 F.3d 753, 814 (8th Cir. 1997).
- A "requesting carrier may choose any particular method of technically feasible . . . access to unbundled network elements," including physical or virtual collocation. *Local Competition First Report and Order* at ¶ 549. Incumbent LECs must provide technically feasible methods of obtaining interconnection or access to unbundled network elements that include, but are not limited to, physical and virtual collocation at the premises of an incumbent LEC. 47 C.F.R. § 51.321.
- A requesting carrier "may achieve the capability to provide telecommunications services completely through access to the unbundled elements of an incumbent LEC's network." *Iowa Utils. Bd.*, 120 F.3d at 814. Incumbent LECs must offer network elements in a manner that allows new entrants to combine them to provide a finished telecommunications service. *Iowa Utils. Bd.*, 120 F.3d at 814.
- A BOC must offer nondiscriminatory access to network elements in a manner that allows competing carriers to combine such elements in order to satisfy section 271(c)(2)(B)(ii). 47 U.S.C. § 251(c)(3).
- While it is unclear from *Iowa Utils. Bd.* whether the Act requires unbundled elements to be provided on a physically separated basis, or whether the Act

allows competing carriers to have physical access to the BOCs' networks in order to combine network elements without the use of physical collocation, at a minimum, Bureau staff believes that the BOC must demonstrate that at least one of the methods it offers satisfies the statutory nondiscrimination requirement. Bureau staff believes that a BOC may satisfy this requirement by, for example, providing physical or virtual collocation, direct access, mediated access, logical or electronic methods for combining network elements, or combining the elements on behalf of competing carriers for a separate charge.

- The following information would be useful in determining whether the BOC's method for allowing competing carriers to combine network elements meets the statutory nondiscrimination requirement:
  - Length of time for new entrants to obtain and combine network elements, e.g., time required to build collocation cages; loop cutover times, etc.
  - Practical availability of the BOC's *selected method for providing access* to network elements, including whether the BOC can meet current and reasonably foreseeable demand and has identified the specific terms and conditions for obtaining such access.

**Checklist Item (iii): Nondiscriminatory Access to  
Poles, Ducts, Conduits, and Rights-of-Way**

**Background**

- Section 271(c)(2)(B)(iii) of the Act requires a section 271 applicant to provide or offer to provide "[n]ondiscriminatory access to the poles, ducts, conduits, and rights-of-way owned or controlled by the [BOC] at just and reasonable rates in accordance with the requirements of section 224."
- Section 224(b) grants the Commission its general authority to carry out the provisions of section 224. Notwithstanding this general grant of authority, section 224(c)(1) states that the Commission shall not regulate rates, terms, and conditions for, or access to, pole attachments where such matters are regulated by the state.

**Checklist Discussion**

- Bureau staff believes that, if a state has exercised its preemptive authority under section 224(c)(1), a BOC satisfies its duty under checklist item (iii) if it complies with the state's, rather than the Commission's, regulations. *See Local Competition First Report and Order* at ¶ 1239.
- There is a preference for negotiations in the pole attachment context. *See Pole Attachment Telecommunications Rate Order* at ¶¶ 10-21. Nonetheless, where the parties do not arrive at mutually satisfactory pole attachment arrangements, and if the state has not exercised its preemptive authority under section 224(c), Bureau staff believes that the BOC must comply with the statutory requirements of section 224 and the Commission's implementing regulations to satisfy the requirement in checklist item (iii) that the BOC provide nondiscriminatory access to poles, ducts, conduits, and rights-of-way at just and reasonable rates. *See Local Competition First Report and Order* at ¶ 1239.

**Nondiscriminatory Access:**

- Bureau staff believes that, in determining whether a BOC provides "nondiscriminatory access" in accordance with the requirements of section 224, the Commission should consider whether the BOC complies with the regulations established by the Commission in the *Local Competition First Report and Order*, implementing the nondiscriminatory access provisions of section 224(f) for purposes of section 251(b)(4).
  - The reasonableness of particular conditions of access imposed by a utility should be resolved on a case-specific basis. *Local Competition First Report and Order* at ¶ 1143.
  - The Commission also adopted five specific rules regarding the circumstances under which utilities, including LECs, may be permitted to impose conditions on access to their poles, ducts, and conduits, and rights-of-way. *Local Competition First Report and Order* at ¶¶ 1151-58.

- In evaluating a request for access, a utility should continue to rely on widely-accepted codes, such as the National Electric Safety Code (NESC), to prescribe standards with respect to capacity, safety, reliability, and general engineering principles. *Local Competition First Report and Order* at ¶ 1151.
- Federal requirements, such as those imposed by the Federal Energy Regulatory Commission (FERC) and the Occupational Safety and Health Administration (OSHA), should continue to apply to utilities to the extent such requirements affect requests for access pursuant to section 224(f). *Local Competition First Report and Order* at ¶ 1152.
- State and local requirements affecting pole attachments are presumed to be reasonable, even if the state has not sought to preempt federal regulations under section 224(c). *Local Competition First Report and Order* at ¶ 1153.
- Where access is mandated, the rates, terms, and conditions of access should be uniformly applied to all telecommunications carriers and cable operators that have or seek access pursuant to section 224(f). *Local Competition First Report and Order* at ¶ 1156.
- A utility should not favor itself over other parties with respect to the provision of telecommunications or video programming services. *Local Competition First Report and Order* at ¶ 1151.
- The Commission also adopted certain guidelines, pursuant to section 224, to facilitate negotiation of pole attachment arrangements. Because checklist item (iii) expressly cross-references section 224, Bureau staff believes that the Commission should consider whether the BOC has complied with these guidelines pertaining to reservation of space by the telecommunications carrier, qualifications for workers installing lines, procedures for modifying facilities, and procedures for denying requests for access. *Local Competition First Report and Order* at ¶¶ 1164, 1165-70, 1182, 1209, 1211, 1224.

#### Just and Reasonable Rates:

- Bureau staff believes that, in order to satisfy the requirement in checklist item (iii) that access be provided at "just and reasonable" rates, a BOC must comply with the statutory requirements of section 224 and the Commission's implementing regulations.
- Currently, a BOC satisfies its duty to provide access to its poles, ducts, conduits, and rights-of-way at "just and reasonable" rates if the rate for such pole attachments complies with the rate methodology set forth in section 224(d)(1) of the Act. 47 U.S.C. § 224(d).

- After February 8, 2001, the rate for pole attachments *used to provide telecommunications service* is "just and reasonable" if the rate for such attachments complies with the Commission's regulations implementing the requirements of section 224(e). 47 U.S.C. §§ 224(e); *Pole Attachment Telecommunications Rate Order* ¶¶ 20-21, 125.

### Checklist Item (iv): Unbundled Local Loops

#### Background

- Section 271(c)(2)(B)(iv) of the Act requires a section 271 applicant to provide or offer to provide access to "[l]ocal loop transmission from the central office to the customer's premises, unbundled from local switching or other services."
- Section 271(c)(2)(B)(ii) of the Act requires a section 271 applicant to show that it offers "[n]ondiscriminatory access to network elements in accordance with the requirements of sections 251(c)(3) and 252(d)(1)."
- Section 251(c)(3) establishes an incumbent LEC's "duty to provide, to any requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory in accordance with the terms and conditions of the agreement and the requirements of [section 251] . . . and section 252."

#### Checklist Discussion

- The local loop is an unbundled network element that must be provided on a nondiscriminatory basis pursuant to section 251(c)(3). *See* 47 U.S.C. § 271(c)(2)(B)(ii) and (iv).
- Bureau staff believes that a BOC seeking to satisfy checklist item (iv) must provide nondiscriminatory access to the various types of unbundled loops identified by the Commission in the *Local Competition First Report and Order*, e.g., 2-wire voice-grade analog loops, 4-wire voice-grade analog loops, and 2-wire and 4-wire loops conditioned to allow the competing carrier to attach requisite equipment to transmit the digital signals needed to provide services such as ISDN, ADSL, HDSL, and DS1-level signals. *Local Competition First Report and Order* at ¶ 380.
- The BOC must deliver the unbundled loop to the competing carrier within a reasonable timeframe, with a minimum of service disruption, and of the same quality as the loop that the BOC used to provide service to its own customer. 47 C.F.R. § 51.313(b); 47 C.F.R. § 51.311(b); *Local Competition First Report and Order* at ¶¶ 312-316.
- A BOC must provide access to any functionality of the loop requested by a competing carrier unless it is not technically feasible to condition the loop facility to support the particular functionality requested. *Local Competition First Report and Order* at ¶ 382. For example, if it is technically feasible to unbundle a loop to allow the CLEC to provide greater bandwidth than that previously provided by the BOC over that loop, the BOC must show that it provides such functionality.

- A BOC must provide cross-connect facilities, for example, between an unbundled loop and a requesting carrier's collocated equipment. *Local Competition First Report and Order* at ¶ 386.
- At the request of participants in the 271 dialogue, Bureau staff is currently discussing how a BOC can meet the statutory nondiscrimination requirement when a requested loop is integrated with other loops through Integrated Digital Loop Carrier (IDLC) technology or similar remote concentration devices. IDLC allows a carrier to aggregate and multiplex loop traffic at a remote concentration point and to deliver that multiplexed traffic directly into the switch without first demultiplexing the individual loops.
- As described in the discussion of checklist item (ii), competing carriers must have nondiscriminatory access to the various functions of the BOCs' operations support systems in order to obtain unbundled loops in a timely and efficient manner. Bureau staff believes that a BOC can demonstrate compliance with this checklist item by submitting comparative performance data. Useful information includes how long it takes to install a loop, how often the promised installation dates are met, how well the competing carrier is informed of the status of its order, and how responsive the BOC is in providing access to needed support functions.

### Checklist Item (v): Unbundled Local Transport

#### Background:

- Section 271(c)(2)(B)(v) of the Act requires a section 271 applicant to provide or offer to provide "[l]ocal transport from the trunk side of a wireline local exchange carrier switch unbundled from switching or other services."
- Section 271(c)(2)(B)(ii) requires a section 271 applicant to provide [n]ondiscriminatory access to network elements in accordance with the requirements of sections 251(c)(3) and 252(d)(1)."
- Section 251(c)(3) establishes an incumbent LEC's "duty to provide, to any requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory in accordance with the terms and conditions of the agreement and the requirements of [section 251] . . . and section 252."

#### Checklist Discussion

- Transport is an unbundled network element that must be provided on a nondiscriminatory basis pursuant to section 251(c)(3). See 47 U.S.C. § 271(c)(2)(B)(ii) and (v). Transport can either be dedicated to a particular carrier or shared by multiple carriers including the incumbent LEC.
- The BOC must provide transport to a competing carrier under terms and conditions that are equal to the terms and conditions under which the incumbent LEC provisions such elements to itself. *Local Competition First Report and Order* at ¶ 315; see also 47 C.F.R. § 51.313(b).
- As described in the discussion of checklist item (ii), competing carriers must have nondiscriminatory access to the various functions of the BOCs' operations support systems in order to obtain unbundled local transport. Bureau staff believes that a BOC can demonstrate compliance with this checklist item by submitting comparative performance data. Useful information include data indicating how long it takes to provision transport, how often the promised installation dates are met, how well the competing carrier is informed of the status of its order, and how responsive the BOC is in providing access to needed support functions.
- At the request of participants in the 271 dialogue, Bureau staff is discussing whether the transport link between a BOC's switch and a third party's switch must be shared, dedicated, or subject to a transiting arrangement when a new entrant purchases shared transport.



### Dedicated Transport:

- To comply with the statutory requirement of section 251(c)(3), an incumbent LEC must:
  - provide unbundled access to dedicated transmission facilities between LEC central offices or between such offices and those of competing carriers, including at a minimum, interoffice facilities between end offices and service wire centers (SWCs), SWCs and interexchange carriers' (IXCs') points of presence (POP), tandem switches and SWCs, end offices or tandems of the incumbent LEC, and the wire centers of incumbent LECs and requesting carriers. *Local Competition First Report and Order* at ¶ 440.
  - provide all technically feasible transmission capabilities, such as DS1, DS3, and Optical Carrier levels (e.g., OC-3/12/48/96) that the competing provider could use to provide telecommunications services. *Local Competition First Report and Order* at ¶ 440.
  - not limit the facilities to which dedicated interoffice transport facilities are connected, provided such interconnection is technically feasible, or restrict the use of unbundled transport facilities. *Local Competition First Report and Order* at ¶ 440; *see also* 47 C.F.R. § 51.309.
  - to the extent technically feasible, provide requesting carriers with access to digital cross-connect system (DCS) functionality in the same manner that incumbent LECs offer such capabilities to IXCs that purchase transport services. A DCS aggregates and disaggregates high-speed traffic carried between competing LEC switches and incumbent LEC switches, thereby facilitating the use of cost-efficient, high-speed interoffice facilities. 47 C.F.R. § 51.319(d)(2)(iv); *Local Competition First Report and Order* at ¶ 444.

### Shared Transport

- To comply with the statutory requirement of section 251(c)(3), an incumbent LEC must:
  - provide shared transport in a way that enables the traffic of requesting carriers to be carried on the same transport facilities that an incumbent LEC uses for its own traffic. *Local Competition Third Reconsideration Order* at ¶ 22.
  - provide shared transmission facilities between end offices switches, between end office and tandem switches, and between tandem switches, in its network. *Local Competition Third Reconsideration Order* at ¶ 25.

- permit requesting carriers that purchase unbundled shared transport and unbundled switching to use the same routing table that is resident in the incumbent LEC's switch. *Local Competition Third Reconsideration Order* at ¶ 45.
- permit requesting carriers to use shared transport as an unbundled element to carry originating access traffic from, and terminating access traffic to, customers to whom the requesting carrier is also providing local exchange service. *Local Competition Third Reconsideration Order* at ¶¶ 38-39.

## Checklist Item (vi): Unbundled Local Switching

### Background

- Section 271(c)(2)(B)(vi) of the Act requires a section 271 applicant to provide or offer to provide "[l]ocal switching unbundled from transport, local loop transmission, or other services."
- Section 271(c)(2)(B)(ii) of the Act requires a section 271 applicant to show that it offers "[n]ondiscriminatory access to network elements in accordance with the requirements of sections 251(c)(3) and 252(d)(1)."
- Section 251(c)(3) establishes an incumbent LEC's "duty to provide, to any requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory in accordance with the terms and conditions of the agreement and the requirements of [section 251] . . . and section 252."

### Checklist Discussion

- Local switching is an unbundled network element that must be provided on a nondiscriminatory basis pursuant to section 251(c)(3). See 47 U.S.C. § 271(c)(2)(B)(ii) and (iv).
- This requires the BOC to show that it provides nondiscriminatory access to:
  - line-side and trunk-side facilities plus the features, functions, and capabilities of the switch. 47 C.F.R. § 51.319(c)(1)(i); *Local Competition First Report and Order* at ¶ 412.
  - line-side facilities include the connection between a loop termination at, for example, a main distribution frame, and a switch line card. 47 C.F.R. § 51.319(c)(1)(i)(A); *Local Competition First Report and Order* at ¶ 412.
  - trunk-side facilities include the connection between, for example, trunk termination at a trunk-side cross-connect panel and a trunk card. 47 C.F.R. § 51.319(c)(1)(i)(B); *Local Competition First Report and Order* at ¶ 412.
  - features, functions, and capabilities of the switch. 47 C.F.R. § 51.319(c)(1)(i)(C); *Local Competition First Report and Order* at ¶ 412. These include:
    - basic switching function of connecting lines to lines, lines to

trunks, trunks to lines, trunks to trunks, as well as the same basic capabilities that are available to the BOC's customers, such as a telephone number, directory listing, dial tone, signaling, and access to 911, operator services, and directory assistance. 47 C.F.R. § 51.319(c)(1)(i)(C)(1); *Local Competition First Report and Order* at ¶ 412.

- vertical features that the switch is capable of providing, including custom calling, CLASS features, and Centrex. 47 C.F.R. § 51.319(c)(1)(i)(C)(2); *Local Competition First Report and Order* at ¶ 412.
- technically feasible customized routing functions. 47 C.F.R. § 51.319(c)(1)(i)(C)(2); *Local Competition First Report and Order* at ¶ 412.
- trunk ports on a shared basis, and routing tables resident in the BOC's switch, as necessary to provide nondiscriminatory access to shared transport facilities. *Local Competition Third Reconsideration Order* at ¶¶ 25-29; *Ameritech Michigan Section 271 Order* at ¶¶ 327-328; and
- unbundled tandem switching, which includes the facilities connecting trunk distribution frames to the tandem switch and all functions of switch itself, including those that establish temporary transmission path between two other switches. 47 C.F.R. § 51.319(c)(2); *Local Competition First Report and Order* at ¶¶ 425, 426.
- Section 251(c)(3) permits competing carriers to purchase unbundled network elements for the purpose of offering exchange access services. *Local Competition First Report and Order* at ¶ 356.
- As described in the discussion of checklist item (ii), competing carriers must have nondiscriminatory access to the various functions of the BOCs' operations support systems in order to obtain unbundled local switching in a timely and efficient manner. At the request of participants in the 271 dialogue, Bureau staff is discussing various methods a BOC may employ to offer nondiscriminatory access to its operations support systems with respect to switching.
- Bureau staff believes that a BOC can demonstrate compliance with this checklist item by submitting comparative performance data. Useful information include how long it takes to provision switching, how often the promised installation dates are met, how well the competing carrier is informed of the status of its order, and how responsive the BOC is in providing access to needed support functions.

- The BOC must be able to transfer a customer's local service to a competing carrier using unbundled local switching -- where such a transfer requires only a change in the BOC's software -- within a time period no greater than the interval within which the BOC transfers end users between interexchange carriers. 47 C.F.R. § 51.319(c)(1)(ii); *Local Competition First Report and Order* at ¶421). Where, however, provisioning of unbundled local switching will require the incumbent LEC to make physical modifications to its network, the BOC must demonstrate that it provisions this element under terms and conditions that are no less favorable to the requesting carrier than the terms and conditions under which the incumbent LEC provides such elements to itself. 47 C.F.R. § 51.313(b); *Local Competition First Report and Order* at ¶¶ 315, 421.

### Checklist Item (vii): 911/E911, Directory Assistance, and Operator Services

#### Background

- Section 271(c)(2)(B)(vii) of the Act requires a section 271 applicant to provide or offer to provide: "[n]ondiscriminatory access to -- (I) 911 and E911 services; (II) directory assistance services to allow the other carrier's customers to obtain telephone numbers; and (III) operator call completion services."

#### Checklist Discussion for 911/E911 Services

- To comply with the statutory nondiscrimination requirement, the BOC must:
  - provide competitors access to its 911 and E911 services in the same manner that a BOC obtains such access, *i.e.*, at parity. *Ameritech Michigan Section 271 Order* at ¶ 256.
  - maintain the E911 database entries for competing LECs with the same accuracy and reliability that it maintains the database entries for its own customers. This duty includes, among other things, populating the E911 database with competitors' end user data and perform error correction for competitors on a nondiscriminatory basis. *Ameritech Michigan Section 271 Order* at ¶ 256.
    - A BOC can demonstrate that it is providing nondiscriminatory access to 911/E911 services by submitting data demonstrating that the 911 database is populated as accurately, and that errors are detected and remedied as quickly, for entries submitted by competing carriers as it is for its own entries. *Ameritech Michigan Order* at ¶ 278. Useful information include the percentage of errors found in competing LEC end user information and BOC end user information, respectively, the percentage of accurate updates, the timeliness of updates for the E911 database, and the mean time to update the E911 database.
  - provide facilities-based competitors with interconnection through the use of dedicated trunks from the requesting carrier's switching facilities to the applicable 911 control office, at parity with what the BOC provides to itself. *Ameritech Michigan Section 271 Order* at ¶ 256.
  - provide facilities-based competitors unbundled access to its 911 database at parity with what the BOC provides to itself. *Ameritech Michigan Section 271 Order* at ¶¶ 256, 270.

#### Checklist Discussion for OS/DA

- Operator services and directory assistance (OS/DA) are network elements that must be unbundled on a nondiscriminatory basis at any technically feasible point. 47 C.F.R. §

51.319(g); *Local Competition First Report and Order* at ¶¶ 534; see 47 U.S.C. § 271(c)(2)(B)(ii) and (vii).

- To comply with the statutory nondiscrimination requirement, the BOC must:
  - permit competing providers to have access to operator services and directory assistance that is equal in quality to the access that the BOC provides to itself. *See Local Competition Second Report and Order* at ¶ 101.
  - allow competing carriers to download all the information in the BOC's directory assistance database and to access specific listings on a "per dip" inquiry basis. *Local Competition Second Report and Order* at ¶¶ 141, 143; *Local Competition First Report and Order* at ¶ 538.
- Where technically feasible, a BOC must make available unbranded or rebranded OS/DA services to competing carriers through its OS/DA platform. *See Local Competition First Report and Order* at ¶¶ 537, 971.
  - At the request of participants in the 271 dialogue, Bureau staff is discussing whether a BOC requirement that competitors establish separate trunk groups to obtain unbranded/rebranded OS/DA services from the BOC is consistent with the statutory obligation to provide nondiscriminatory access to OS/DA.
  - An additional issue under discussion is whether the BOC must provide unbranded or rebranded OS/DA through its own OS/DA platform in those states where the state commission has determined it is not "technically feasible" for a BOC to provide unbranded/rebranded OS/DA to competing carriers using the BOC's OS/DA platform.
- As described in the discussion of checklist item (ii), a BOC must provide competing carriers the necessary OSS functions to obtain access to OS/DA in a timely and efficient manner. Bureau staff believes that a BOC can demonstrate compliance with this checklist item by submitting comparative performance data. An example of such data would be a measurement of the speed of answer provided by the BOC.

### Checklist Item (viii): White Pages Listings

#### Background

- Section 271(c)(2)(B)(viii) states that access or interconnection provided or generally offered by a BOC must include "White [P]ages directory listings for customers of the other carrier's telephone exchange service."

#### Checklist Discussion

- Bureau staff believes that the term "directory listing," as used in checklist item (viii), should include, at a minimum, the subscriber's name, address, telephone number, or any combination thereof. *See* 47 U.S.C. § 222(f)(3)(A). Bureau staff believes that the term "White Pages" refers to the local alphabetical directory that includes the residential and business listings of the customers of the local exchange providers.
- Bureau staff believes that checklist item (viii) requires the BOC to include the names, addresses, and telephone numbers, or combinations thereof, of the customers of a competing carrier in the local White Pages directory.
- To compete effectively in the local exchange market, new entrants must be able to provide service to their customers at a level that is comparable to the service provided by the BOC. Bureau staff believes that checklist item (viii) requires the BOC to provide a White Pages listing for the customers of a competing carrier in a nondiscriminatory manner.
- Bureau staff believes that, in determining whether a BOC satisfies the requirements of checklist item (viii), the Commission should consider the following:
  - whether the listing the BOC provides to a competitor's customers is identical to, and fully integrated with, the BOC's customers' listings.
  - whether the BOC provides a White Pages listing for a competitor's customers with the same accuracy and reliability that it provides to its own customers.
  - whether the BOC has procedures in place that are intended to ensure that the listings provided to a competing carrier are comparable, in terms of accuracy and reliability, to the listings provided to the BOC's customers.



## Checklist Item (ix): Numbering Administration

### Background

- Section 271(c)(2)(B)(ix) of the Act requires a section 271 applicant to provide nondiscriminatory access to telephone numbers for assignment to competing carriers' telephone exchange service customers, "[u]ntil the date by which telecommunications numbering administration guidelines, plan, or rules are established." After that date, the BOC is required to comply with such guidelines, plan, or rules.

### Checklist Discussion

- When "consider[ing] each BOC's application to enter in-region interLATA services pursuant to section 271(c)(2)(B) on a case by case basis," the Commission "will look specifically at the circumstances and business practices governing CO [Central Office] code administration in each applicant's state to determine whether the BOC has complied with section 271(c)(2)(B)(ix)." *Local Competition Second Report and Order* at ¶ 345.
- BOC functions as numbering administrator will be transferred over the next 18 months to the neutral North American Numbering Plan Administrator (NANPA), which will be governed both by industry guidelines and by rules the Commission codified in its October 9, 1997 order naming the new NANPA, Lockheed Martin IMS. Once that transition is complete, the guidelines, plan, and rules will have been established (subject to further revision by the industry and/or the Commission), and the BOCs will no longer serve as CO code administrators.
- Bureau staff believes that the Commission, in determining whether a BOC has complied with section 271(c)(2)(B)(ix), should consider whether the BOC has provided nondiscriminatory access to numbers that the BOC assigns in its role as CO administrator. Examples of the kind of information that would be instructive include adherence to industry guidelines, such as the Central Office Code Administration Guidelines (Central Office Code (NXX) Assignment Guidelines (INC 95-0407-008)(April 1997)) and the NPA Code Relief Planning and Notification Guidelines (NPA Code Relief Planning and Notification Guidelines (INC 97-0404-016)(April 1997)), where applicable.
- Checklist item (ix) is similar to the requirement in section 251(b)(3) that LECs provide nondiscriminatory access to telephone numbers to competing providers by permitting competing providers access to telephone numbers that is identical to the access that the LEC provides itself. 47 C.F.R. § 51.217(c)(1); *Local Competition Second Report and Order* at ¶ 106. Bureau staff believes that providing nondiscriminatory access to telephone numbers, for purposes of section 271(c)(2)(b)(ix), necessitates compliance with the rules implementing section 251(b)(3). Specifically:
  - incumbent LECs providing telephone numbers may only charge other

telecommunications carriers fees for the assignment of CO codes if they charge one uniform fee for all carriers, including themselves and their affiliates. *Local Competition Second Report and Order* at ¶¶ 328, 332-33;

- incumbent LECs are not allowed to "assess[] unjust, discriminatory, or unreasonable charges for activating CO codes on any carrier or group of carriers." *Local Competition Second Report and Order* at ¶ 333;
- any attempt by an incumbent LEC "to delay or deny CO code assignments for competing providers of telephone exchange service would violate section 251(b)(3), where applicable, section 202(a), and the Commission's numbering administration guidelines." *Id.* ¶ 334. Incumbent LECs must "apply identical standards and procedures for processing all numbering requests, regardless of the identity of the party making the request." *Local Competition Second Report and Order* at ¶ 333.

### Checklist Item (x): Databases and Associated Signaling

#### Background

- Section 271(c)(2)(B)(x) of the Act requires a section 271 applicant to provide or offer to provide "[n]ondiscriminatory access to databases and associated signaling necessary for call routing and completion."
- Section 271(c)(2)(B)(ii) of the Act requires a section 271 applicant to demonstrate that it offers "[n]ondiscriminatory access to network elements in accordance with the requirements of sections 251(c)(3) and 252(d)(1)."
- Section 251(c)(3) in turn establishes an incumbent LEC's "duty to provide, to any requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory in accordance with the terms and conditions of the agreement and the requirements of [section 251] . . . and section 252."

#### Checklist Discussion

- Databases and signaling are unbundled network elements that must be provided on a nondiscriminatory basis pursuant to section 251(c)(3). *See* 47 U.S.C. § 271(c)(2)(B)(ii) and (x).
- The BOC must demonstrate that it provides or offers to provide competitors access to databases and associated signaling necessary for call routing and completion in the same manner as it provides such access to itself. Specifically, the BOC must demonstrate that it provides or offers to provide nondiscriminatory access to the following components:
  - signaling networks, including signaling links and signaling transfer points, which give the requesting carrier the ability to send signals between its switches (including unbundled switching elements), between its switches and the BOC's switches, and between its switches and those third party networks with which the BOC's signaling network is connected. 47 C.F.R. § 51.319(e)(1); *Local Competition First Report and Order* at ¶¶ 479-483.
  - call-related databases that are necessary for call routing and completion, including the following: (1) line-information databases (*e.g.*, for calling cards); (2) toll-free databases (*i.e.*, 800, 888); (3) downstream number portability databases (*i.e.*, the BOC's own database containing number portability routing information); (4) Advanced Intelligent Network (AIN) databases. 47 C.F.R. § 51.319(e)(2); *Local Competition First Report and Order* at ¶¶ 484-492.

- Service Management Systems, which are used to create, modify, or update information in call-related databases that are necessary for call routing and completion. 47 C.F.R. § 51.319(e)(3); *Local Competition First Report and Order* at ¶¶ 493-500.
- The BOC should provide a requesting telecommunications carrier with access to call-related databases and service management systems in a manner that complies with section 222 of the Act. 47 C.F.R. § 51.319(e)(2)(vi) and (3)(v).
- Useful information to determine compliance with this checklist item includes:
  - a comparison of the manner in which a BOC obtains access to its databases and signaling network and the manner in which it provides, or would provide, if requested, such access to competing providers;
  - an explanation of any differences in the manner in which a BOC obtains access to a database or signaling system, and the manner in which such access is provided to a competing provider, the need for such differences, and the basis for the Commission to find that such access satisfies the nondiscrimination requirement;
- As described in the discussion of checklist item (ii), competing carriers must have nondiscriminatory access to the various functions of the BOCs' operations support systems in order to obtain access to databases and signaling in a timely and efficient manner.

### Checklist Item (xi): Number Portability

#### Background

- Section 271(c)(2)(B)(xi) of the Act states that "[u]ntil the date by which the Commission issues regulations pursuant to section 251 to require number portability," a section 271 applicant must provide "interim telecommunications number portability through remote call forwarding, direct inward dialing trunks, or other comparable arrangements, with as little impairment of functioning, quality, reliability, and convenience as possible."
- Section 271(c)(2)(B)(xi) further provides that, after the Commission issues such number portability regulations, a section 271 applicant must be in "full compliance with such regulations."

#### Checklist Discussion

- In determining whether a BOC has satisfied the number portability requirement of the competitive checklist, the Commission must determine whether the BOC provides number portability in accordance with section 251 and the Commission's number portability rules implementing section 251. Consistent with existing rules and orders, the Commission shall consider the following:
  - With respect to interim number portability:
    - Whether the BOC is providing number portability through remote call forwarding, direct inward dialing, or other comparable and technically feasible interim number portability methods as soon as reasonably possible following a specific request from a competitor in those areas where it has received a request from a competitor and where the BOC is not yet obligated to deploy long-term number portability. 47 C.F.R. § 52.27; *Telephone Number Portability First Report and Order* at ¶¶ 110-116.
    - Bureau staff believes that a BOC should be required to furnish the specific method of interim number portability that a competing carrier requests, if such method is technically feasible and not unduly burdensome. Bureau staff further believes that in deciding whether a particular method is unduly burdensome, relevant factors are the extent of network upgrades needed to provide that particular method, the cost of such upgrades, the business needs of the requesting carrier, and the timetable for deployment of a long-term number portability method in that particular geographic location.

- Whether the BOC's rates for interim number portability comply with the Commission's criteria for competitive neutrality. 47 C.F.R. § 52.29.
- With respect to long-term number portability:
  - Whether long-term number portability will be, or has been, deployed in the state in accordance with the implementation schedule established by the Commission. 47 C.F.R. § 52.23; *Telephone Number Portability First Reconsideration Order* at ¶¶ 48-126 and App. B; *Ameritech Michigan Section 271 Order* at ¶ 342. For those Metropolitan Statistical Areas in the BOC's state that are part of the Commission's phased implementation schedule, relevant information would include:
    - the BOC's schedule for intra- and inter-company testing of a long-term number portability method;
    - the current status of the switch request process, including identification of the particular switches for which the BOC is obligated to deploy number portability and the status of deployment in requested switches; and
    - the schedule under which the BOC plans to provide commercial roll-out of a long-term number portability method in specified central offices in the relevant state. *Ameritech Michigan Section 271 Order* at ¶ 342.
  - Bureau staff believes that a timely filed request for extension of the Commission's implementation schedule tolls the obligation to comply with the Commission's rules for purposes of checklist compliance. If, however, the Commission denies such a request for an extension of the implementation schedule, Bureau staff believes such denial would be grounds for concluding checklist item (xi) has not been met.
- With respect to both long-term and interim number portability:
  - Whether the BOC is providing number portability in a nondiscriminatory manner consistent with the definition of number portability set forth in 47 U.S.C. § 153(30). 47 C.F.R. § 52.23; *Telephone Number Portability First Report and Order* at ¶¶ 46-63, 110-116; *Telephone Number Portability First Reconsideration Order* at ¶¶ 11-47.
  - As described in the discussion of checklist item (ii), competing carriers must have nondiscriminatory access to the various

functions of the BOCs' operations support systems in order to request and obtain number portability in a timely and efficient manner. *Ameritech Michigan Section 271 Order* at ¶ 342.

- Bureau staff believes that, to provide nondiscriminatory access to loops, the Commission should consider whether provision of number portability is coordinated with loop cutovers so that the competitive LEC's customers do not experience prolonged service disruptions between transfer of service from the BOC to the competitive LEC.

### Checklist Item (xii): Local Dialing Parity

#### Background

- Section 271(c)(2)(B)(xii) of the Act requires a section 271 applicant to provide "[n]ondiscriminatory access to such services or information as are necessary to allow the requesting carrier to implement local dialing parity in accordance with the requirements of section 251(b)(3)."
- Section 251(b)(3) imposes upon all LECs the duty to provide dialing parity to providers of telephone exchange service and telephone toll service with "nondiscriminatory access to telephone numbers, operator services, directory assistance, and directory listing, with no unreasonable dialing delays."
- The Act defines "dialing parity" to mean that:  
  
a person that is not an affiliate of a local exchange carrier is able to provide telecommunications services in such a manner that customers have the ability to route automatically, without the use of any access code, their telecommunications to the telecommunications service provider of the customer's designation from among 2 or more telecommunications service providers (including such local exchange carrier). 47 U.S.C. § 153(15).

#### Checklist Discussion

- The Eighth Circuit vacated the Commission's dialing parity rules, "but only to the extent that they apply to intraLATA telecommunications." *See People of the State of Cal. v. FCC*, 124 F.3d 934, 943 (8th Cir. 1997).
- Consistent with the statutory definition of dialing parity and section 251(b)(3), Bureau staff believes that a BOC, to comply with checklist item (xii), must establish that customers of competing carriers are able to dial the same number of digits that the BOC's customer dials to complete a telephone call and that they do not experience unreasonable dialing delays.



### Checklist Item (xiii): Reciprocal Compensation

#### Background

- Section 271(c)(2)(B)(xiii) of the Act requires that a section 271 applicant's access and interconnection include "[r]eciprocal compensation arrangements in accordance with the requirements of section 252(d)(2)." "Reciprocal compensation arrangements" refer to agreements between interconnecting carriers about charges for the transport and termination of local telecommunications traffic over their respective networks.
- Section 252(d)(2) states that "[f]or purposes of compliance by an [incumbent ILEC] with section 251(b)(5)[s requirement that LECs 'establish reciprocal compensation arrangements for the transport and termination of telecommunications,'] a State commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable unless (i) such terms and conditions provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier; and (ii) such terms and conditions determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls." Section 252(d)(2)(B) further states that "[t]his paragraph shall not be construed (i) to preclude arrangements that afford the mutual recovery of costs through the offsetting of reciprocal obligations, including arrangements that waive mutual recovery (such as bill-and-keep arrangements) or (ii) to authorize the Commission or any State commission to engage in any rate regulation proceeding to establish with particularity the additional costs of transporting or terminating calls, or to require carriers to maintain records with respect to the additional costs of such calls."

#### Checklist Discussion

- Bureau staff believes that in analyzing compliance with checklist item (xiii), the Commission should consider whether reciprocal compensation arrangements in accordance with section 252(d)(2) are in place.
- Bureau staff believes that if the BOC offers in its SGAT or provides in its interconnection agreement reciprocal compensation arrangements, it must demonstrate compliance with the SGAT or interconnection agreement by making all required payments in a timely fashion. At the request of participants in the 271 dialogue, Bureau staff is discussing whether a BOC meets this checklist item when there are disputes between the BOC and competing carriers over whether the BOC is obligated to pay reciprocal compensation for certain types of traffic, or over measurement of traffic eligible for reciprocal compensation.

### Checklist Item (xiv): Resale

#### Background

- Section 271(c)(2)(B)(xiv) of the Act requires a section 271 applicant to make "telecommunications services . . . available for resale in accordance with the requirements of sections 251(c)(4) and 252(d)(3)."
- Section 251(c)(4)(A) requires incumbent LECs "to offer for resale at wholesale rates any telecommunications service that the carrier provides at retail to subscribers who are not telecommunications carriers."
- Section 251(c)(4)(B) prohibits "unreasonable or discriminatory conditions or limitations" on resale, with the exception that "a State may, consistent with FCC regulations under this section, prohibit a reseller that obtains at wholesale rates a telecommunications service that is available at retail only to a category of subscribers from offering such service to a different category of subscribers."
- Section 252(d)(3) sets forth the basis for determining "wholesale rates" as the "retail rates charged to subscribers for the telecommunications service requested, excluding the portion thereof attributable to any marketing, billing, collection, and other costs that will be avoided by the local exchange carrier."

#### Checklist Discussion

- The Commission has issued several non-pricing regulations relevant to resale that were affirmed by the Eighth Circuit. A BOC must establish that it complies with these regulations to satisfy checklist item (xiv). These regulations provide:
  - Resale restrictions, with limited specified exceptions, are presumptively unreasonable. *Local Competition First Report and Order* at ¶ 939.
  - The limited exceptions are: 1) a state commission may permit an incumbent LEC to prohibit a competing carrier that purchases at wholesale rates for resale, telecommunications services that the incumbent LEC makes available only to residential customers or to a limited class of residential customers, from offering such services to classes of customers that are not eligible to subscribe to such services from the incumbent LEC, *see* 47 C.F.R. § 51.613(a)(1); and 2) short-term (90 days or less) promotional prices do not constitute retail rates for the underlying services, and, therefore, are not subject to the wholesale obligation. 47 C.F.R. § 51.613(a)(1) and (2).
  - Offerings under section 251(c)(4) apply to volume-based discounts; however, the avoidable costs for a service with volume-based discounts may be different than without volume contracts. *Local Competition First Report and Order* at ¶ 951.

- With respect to volume discount offerings, it is presumptively unreasonable for incumbent LECs to require individual customers of a reseller to comply with incumbent LEC high-volume discount minimum usage requirements, so long as the reseller, in aggregate, under the relevant tariff, meets the minimal level of demand. *Local Competition First Report and Order* at ¶ 953.
- Other than the two exceptions from the resale requirement in 47 C.F.R. § 51.613(a), an incumbent LEC may impose a resale restriction only if it proves to the state commission that the restriction is reasonable and nondiscriminatory. 47 C.F.R. § 51.613(b).
- A BOC's refusal to offer Contract Service Arrangements (CSAs) at a wholesale discount constitutes non-compliance with checklist item (xiv), as it is not a "reasonable and nondiscriminatory" resale restriction. *BellSouth South Carolina Section 271 Order* at ¶ 215. There is no statutory basis for creating a general exemption from the wholesale requirement for CSAs. *BellSouth South Carolina Section 271 Order* at ¶¶ 216-18. 47 C.F.R. § 51.613(b) was intended only to grant state commissions the authority to approve "narrowly-tailored" resale restrictions that an incumbent LEC proves to a state commission are reasonable and nondiscriminatory. *BellSouth South Carolina Section 271 Order* at ¶ 218.
- The Commission has not addressed whether cancellation penalties when a new entrant seeks to resell a CSA contract are an unreasonable condition or limitation on resale. It has recognized, however, that these fees, depending upon their nature, may create additional costs for a CSA customer that seeks service from a reseller, which could insulate portions of the market from competition through resale. *BellSouth South Carolina Section 271 Order* at ¶ 222.
- A BOC may not refuse to offer for resale at a wholesale discount CSAs that the BOC entered into after the effective date of a state commission's arbitration order rendered its section 271 application deficient. *BellSouth Louisiana Section 271 Order* at ¶ 63. The Commission has not addressed the issue whether CSAs entered into before the effective date of a state commission's arbitration order should be offered for resale at a wholesale discount.
- Bureau staff believes that the Commission should also require a BOC to offer pre-arbitration CSAs for resale at the wholesale discount rate, consistent with the position the Commission's General Counsel has asserted in certain *amicus curiae* briefs filed in federal district court.
- In addition, a BOC must provide nondiscriminatory access to its OSS functions to competing carriers that resell BOC services. (For a discussion of OSS, see checklist item (ii).) Bureau staff believes that a BOC can demonstrate that it is providing non-discriminatory access to its OSS functions for resale by submitting performance data.

Useful information include whether there is nondiscriminatory access to OSS for resale are information on the status of resale orders, the time it takes to fulfill a service request for a resale order, and the number of resale orders completed on time. Ongoing performance and monitoring will assist in ensuring that the BOC continues to meet its statutory obligations after receiving section 271 authorization.